STARFLIGHT™

The Manual

30-10-4619

Dear Starship Commander:

We are sorry you were unable to attend the Operation Starflight briefing last week. Those who attended can vouch for the enthusiasm and excitement that prevailed during the meeting. We at Interstel feel that this is the beginning of a new era, and that you and your colleagues will be instrumental in making this mission a success.

To make sure you will have all the information you need, we have included a copy of the briefing transcript, and your own copy of the Technical Reference Manual. This latter document contains the information you need to operate your starship; without it, you could find yourself in deep space with no way out. Guard it carefully. Needless to say, it is highly confidential and is, if you will excuse the old cliche, For Your Eyes Only. The briefing transcript is included for the background information it contains. It was decided to provide this information in this form rather than as a summary, to give the absent members a sense of the atmosphere that prevailed during the meeting.

As you know, Interstel is in no position to outfit starships as fully as you might like; consequently, a lot hinges on your entrepreneurial ability to generate revenues early on. You will then be able to use those revenues to outfit your starship for more distant (and more profitable) voyages. The following are a few suggestions in that direction:

Your initial allotment of 12,000 mu's is enough to allow you to buy four cargo pods, and to gather and train a crew. Your ship comes equipped with one Class 1 engine and 20 cubic meters of endurium, so you won't need to do anything to your starship except name it. We suggest you train your crew with the funds you have remaining after you purchase the cargo pods. You will then be in a good position to mine the minerals found on the planets in our own solar system. Fill the cargo pods with minerals and bring them back to Starport, where you will find willing buyers. We realize that some of you may find this strictly commercial endeavour somewhat degrading, but we have found that it is necessary in order to complete your primary mission. Of course, you are free to follow whatever strategy you see fit — just be aware that Interstel cannot afford to give you a second chance should you fail in your first attempt.

No matter what strategy you choose to adopt, it is wise to avoid the following, any one of which can spell disaster:

1. Running out of fuel
2. Running out of energy in your terrain vehicle
3. Running out of money
4. Getting killed in combat
5. Landing on a planet with crushing gravity
6. Engine or communication failures
7. Getting killed on planetside by storms or hostile lifeforms

In addition, we recommend that you check your Notices in Starport Operations before embarking on a journey. Notices often contain valuable clues, and may help you avoid potential disaster.

On behalf of all the personnel here at Interstel headquarters, we would like to wish you great success in your mission.

May the Rock of Truth shine brightly upon you.

Terrence Willwater
Director, Interstel

BRIEFING TRANSCRIPT

(The following is a transcript of a briefing before a group of starship commander trainees. The briefing was chaired by Vice-Director Phexipotex and included a cross-representation of various races).

Phexipotex: Thank you for coming everyone. Please be seated.

You have all been carefully selected for your special skills and abilities and your aptitudes in the areas of diplomacy and exploration. We are counting on this driving force inherent in all of you to help answer the puzzles and riddles that have long plagued our scientists.

While conducting research in the Southern Hot Zone15 years ago, on the sixteenth day of ten-month, 4604, a team of Interstel scientists found a deep shaft in the crust of the planet, leading to a vast and ancient underground network. Investigation revealed this to have been built by ... the first colonists of Arth.

People, please! May I have some quiet ... Thank you. I assure you that this conclusion was reached only after many years of careful study. At this point there is little room for doubt that Arth was, in fact, colonized by a group called Noah 2, and that this group came from a planet called Earth. I'm sure you can all appreciate now why this information has not been released to the public. Obviously, it is vital that up to date proof be offered when we commence public announcements, otherwise the notion that Earth was a real place and that Noah 2 an actual group would be met with skepticism, to say the least. I realize that the acceptance of a new system of beliefs and of new technological concepts is a difficult task. Many of you may still be skeptical — this is perfectly understandable. I only ask you to bear with me for now. After this briefing you will be seeing some holo-footage which will, I think, cast any doubts from your minds. And, of course, when you begin your explorations you will be using the new technology yourselves.

As you might imagine, this discovery answers a good many questions; but it also raises quite a few. There was an Old Empire and a Great Interstellar War. From what we have been able to piece together it appears that during the final stages of the war, when the Empire was facing imminent defeat, an ambitious colonization project, Project Noah, was launched by an organization then known as the Institute. The reasons for the war, for Noah 2's failure to maintain their level of technology, and for the Empire's final fate have not yet been determined. We have, however, found several references to "Uhlek", "Gazurtoid", and Phlegmak" and believe these to be names of races

which were hostile to the Empire — possibly responsible for its downfall. Further evidence confirms the theory that the Humans, Elowan, Thrynn, and Velox (referred to then as the Veloxi) were all part of the Old Empire and were represented in the Noah 2 group.

In addition to the historical data, we have uncovered sufficient technical data to let us reconstruct some of the Old Empire technology. The most significant area of this technology has focused on peculiar lumps of crystaline matter which the Empire called Endurium. It was on this substance (unlike any we have ever encountered) that their *superphotonic* (or faster than light) technology was based. Fortunately, there was enough Endurium in the underground colony to allow us to experiment freely and actually construct a few prototype starships. Yes, we have constructed starships, and superphotonic technology does work. The next phase of our experimentation involves exploration. Our scientists and the public are eager for answers.

In front of each of you is a Captain's Technical Reference Manual. Information relevant to your mission can be found in the main body of the text; other information allowing a deeper understanding of those with whom you will deal has been compiled by our researchers and can be found in the Appendices. Should you decide to participate in the exploration of the unknown, you will be given command of a ship and your choice of crew. As an additional incentive you will be paid for any discoveries you make; you may use this money to purchase anything you desire or to train your crew and modify your ship further.

One final note: you are not the first Interstel exploration group. The first group, which consisted of 13 ships and 78 explorers, was dispatched five years ago. To date, only two of these ships have returned and we have had no word as to the status of the others. Because each ship was carrying only enough fuel for a one year journey we must assume that they are ... well, that they will not be returning. Nevertheless, in the past five years we have made significant advances in starship technology and you are a much more capable group than the first. We are confident that you will have no major difficulties in successfully completing your missions.

I would now like to open this briefing to questions. Yes, Navigator Eshhh-ahhr.

Eshhh-ahhr: Vice-Director Phexipotex, you mentioned that two ships had returned from earlier explorations. Is there anything that you might be able to tell us of their experiences that would be of interest?

Phexipotex: It so happens that one of the captains of those vessels is here among us, Captain Thysss Thyrrthynnn of the ISS Hyperion. Captain, would you mind standing up and answering this question?

Thysss Thyrrthynnn: Cccertainly. It iss difficult to know wherrre to beginn. Ourrr voyage lasssted forr the betterr parrt of two yearrsss. As it happened we chose initially to trrravel in a downssspin dirrection with a 14 degree corewarrd orientationnn. Ourr firsst encounterr with alien vesselsss was jusst corewarrd of a G-class ssysstem at 150, 64. We were sssurrounded by three sscout shipsss of a very peculiarr dessign. Upon entering communicationss we were asstonisshed to find that these sshipsss were manned by Elowannn. We were even morre asstounded to find that the Elowannn have nnot outgrownn theirrr foolish animosity forr the Thrynn as have the Elowann herre on Arrrth. Thisss wass evidenced by the fact that ssshortly affter communicationss were essstablisshed the Elowan ssent uss a messsage to the effect that they could detect my pressence annd that of the otherrr Thrynn aboarrd the Hyperrionn, wherreupon they immediately terrminated communicationsss annd opened firre on usss. Fortunately I had equipped the Hyperrionn with adequate wweaponrry to handle thisss.....annoyanccce. In fact, I consequenntly found it necessary to desstroy quite a numberrr of Elowann shipsss; purely in sself-defense of courssse. Mossst rregrretable.

Phexipotex: Please! Please! May I have order! I am certain that Captain Thyrrthynn resorted to the use of force only when *absolutely* necessary. I am confident that she acted only in good faith and never fired the first shot - is this not so Captain?

Thysss Thyrrthynnn: Of courssse. Though it was necesssary upon ccertain occassionsss to...
Phexipotex: There, you see? Now please, may we have some quiet so that the Captain can continue her narration?

Thysss Thyrrthynnn: Yesss. Well durring the sssecond month of ourrr explorationss we alltered courrssse and trravelled in an outwarrd and downssspin dirrection. It was only a matterrr of weekss before we encounterred ourr ssecond alienn rrrace. Thesse aliensss werre harrdly alienn howeverr, for thisss time we had encountered the Thrynn. It isss a difficult thing to desscrribe how it feelss to come faccce to faccce with oness remote ancestorrsss. To feel that one hass finally come home affter being lossst for a thoussand yearsss. After ssspending the nexxt yearr and a half among my lossst brrotherss and ssistersss it was all that I could do to forrce mysself to rreturrn herre. In fact, both of the otherr Thrynn on my crrew, ThyssArrla and N'qrrlsss chose to ssstay behinnd.

Phexipotex: Question? Yes, in the back.

G694337: If I may put a question to Captain Thyrrthynnn. What did you do for fuel all this time Captain? I understand you did not take along enough to last the entire two years.

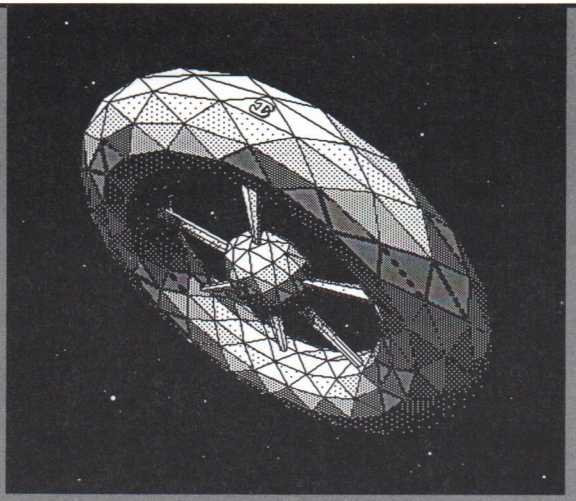
Thysss Thyrrthynnn: Of courrssse. We did manage to buy a fairrr bit frrom Ssstarporrt by doing ssome local ssectorrr mining beforre leaving on ourrr expeditionn. During ourr time in Elowannn sspaccce we managed to ssalvage enough ennndurrium from the debris of the shipsss we desstroyed in sself defensse. We alsso sssalvaged a conssiderable amount of plutoniumm which the Thrynn willingly trraded forrr fuel. Finally, with the help of the Thrynn we managed to llocate a few planetsss with abundant ancient ruinsss. These we used as refueling basesss for local explorationsss.

Phexipotex: We have time for one more question. Ok.....yes.

Garan Leb: A question for you, Vice-Director. I wonder if you could explain why it is necessary that we earn the money to build our ship and crew. Surely Interstel has the resources to provide us with the best equipment which would optimize our chance for success.

Phexipotex: I would like to remind you that Interstel is not a government controlled organization, nor are we a military operation. Our resources are, in fact, limited and we have no way of knowing which few of you will possess the necessary qualities to successfully command an Interstellar Starship. It is not in our best interest to waste what other resources we have on the rest of you who will, pardon the expression, wash out right away. This therefore, is our means of determining who among you is most capable, while at the same time providing a little personal incentive to ensure that we get the most from every one of you.

I wish you all the best of luck in your explorations. Thank you.



Starport Central, Arth Orbit Station

CONFIDENTIAL

Technical Reference Manual

STARFLIGHT

TECHNICAL REFERENCE MANUAL

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PART 1: General Information

1.1 Objectives

Apart from any other goals you may set for yourself, two goals will be of primary importance to you. These are: **1) gathering information 2) generating revenue**. It should be obvious that the more information you gather, the more effective your explorations. As for revenue, capital is indispensible for building an optimal ship and crew, thereby maximizing your efficiency. Interstel offers only a minimum amount of capital at the outset of your explorations.

You can generate revenue (measured in *monetary units* or *mu*'s) in a number of ways. The following is a partial list. Commanders with an entrepreneurial bent should find no difficulty expanding the list. Of course, space piracy is frowned upon, except in self defense.

1.1.1 Sale of Minerals. Interstel will purchase any minerals you bring back. Some, for example Endurium, are worth more than others. You will need to decide which ones are worth bringing back. The values of minerals can be found in the Mineral Value Chart in Part 5 ("Planetside") of this Reference Manual.

1.1.2 Sale of Artifacts. Interstel will pay for any artifacts you find, whether contemporary or ancient. The amount of mu received depends on Interstel's evaluation of the artifact. Note that you can repurchase artifacts previously sold.

1.1.3 Sale of Lifeforms and Lifeform Data. Alien lifeforms can either be captured or holographically recorded, and then sold at Starport. Specimens bring a higher price than recordings, but take up cargo space. Interstel will not purchase specimens or recordings already in its collection.

1.1.4 Recommending Viable Colony Worlds. Superphotonic message drones installed in the ships can be used to recommend planets that appear suitable for colonization. Do not take this responsibility lightly, since the lives of thousands of colonists may depend upon your recommendation. When you return to Starport you will be given a report on the suitability of your recommendations. Should your recommended planets be found unsuitable, you will be fined.

The rest of this manual contains valuable information, including descriptions of the races found on Arth, a list of mineral values, a chart of specific lifeform evaluation aids, and the criteria to be used

in determining the suitability of a planet for colonization. Study it well, for the future of the galaxy may well depend upon the success of your mission.

Your kit contains two additional items: First, the Starmap, an invaluable guide to the galaxy, provides important information on space coordinates and interstellar distances. Keep it handy at all times. Second, the Security Code Wheel provides the access code that allows you to leave Starport. See instructions for its use in the Command Summary reference card.

1.2 Races

You can choose from the following races of Arth when composing your crew. Each category includes a descriptive synopsis and some characteristic statistics. These statistics include:

Learning Rate: a number from 0 to 10 which represents the number of skill points a member of that race acquires from a single training session;

Durability: a number from 0 to 10 which represents the amount of physical damage a member of that race can sustain;

Inherent Aptitude: the innate ability for each race in any of the five skills. The range of abilities is Excellent, Good, Average, and Poor. The Initial Value defines the beginning skill levels, and the Maximum Value defines the maximum skill level a member of that race is capable of attaining. These values are tabulated as follows:

Ability Level	Initial Value	Maximum Value
Excellent	50	250
Good	30	200
Average	10	150
Poor	0	100

See Section 1.3 ("Skills Overview") for a description of the five essential skills and their roles in the successful exploration of space.

HUMAN

Humans are a bi-pedal omnivorous race with smooth skin and a characteristic matt of scalp hair. They are 1-1/2 to 2 meters in height, and are light beige to dark brown in color. Humans have an internal skeleton and two small, narrow-set eyes which allow binocular vision. This race is particularly aggressive and tenacious. While moderately weak physically, Humans are highly flexible mentally and are particularly adept at theoretical modeling and in applications of logic and inference. Finally, although there is a degree of sexual dimorphism in this race, the differences are insignificant.

Durability	06
Learning Rate	09
Inherent Aptitude:	
Science	Excellent
Navigation	Good
Engineering	Good
Communication	Good
Medicine	Good

VELOX

The Velox are insect-like creatures with two legs, two arms, and two intermediate appendages which can serve as either. They have a hard, red, chitinous exoskeleton, two large compound eyes, and two antennae which serve as olfactory sensors. When in an upright position a Velox is approximately 1-1/2 meters in height if male and 2-1/2 meters if female. Velox culture is akin to hive culture and they are not known to be particularly intelligent. They are, however, exceptionally strong and durable and they have excellent hand/eye coordination. These traits, in conjunction with a well developed spatial sense, make them well suited for engineering and technical tasks.

Durability	08
Learning Race	06
Inherent Aptitude:	
Science	Good
Navigation	Excellent
Engineering	Excellent
Communication	Poor
Medicine	Poor

THRYNN

The Thrynn are a bi-pedal, carnivorous, reptilian race. Although graceful, with long necks and tails, they are very muscular and are covered with tough protective scales. They range in color from green to grey and are approximately 1-1/2 meters in height. Like Humans, they have an internal skeleton, and two forward set eyes. The Thrynn are cultured and diplomatic, but are said to be devious and cunning. For no apparent reason, they harbor an ancient animosity for the Elowan. The plant people, in turn, have little love for the Thrynn (see note below). The Thrynn have a fair overall learning rate and a fair constitution. They excell in situations involving protocol and diplomacy.

Durability	06
Learning Rate	07
Inherent Aptitude:	
Science	Good
Navigation	Good
Engineering	Good
Communication	Excellent
Medicine	Poor

ELOWAN

The Elowan are a bi-pedal photosynthetic race, 1 to 2 meters in height. They are willowy and delicate with numerous prehensile vines. Their color may range from a light yellowish-green to a deep greenish blue. They have two large, compound eyes which are characteristically a deep reddish-brown. They are highly empathetic and are particularly creative thinkers. Although weak physically, they excell in interpersonal skills. Their excellent learning rate allows them to learn all skills relatively quickly.

Durability	02
Learning Rate	10
Inherent Aptitude:	
Science	Average
Navigation	Good
Engineering	Average
Communication	Excellent
Medicine	Excellent

ANDROID

Androids are sophisticated automatons and not, strictly speaking, a race. Because they are constructed of metals and plastics they are the most durable of all the races. At the same time, however, they cannot benefit from training because their programming is hard-wired and their skills are set at a fixed efficiency level. Of the numerous models available, Interstel uses the popular Biosynthetic DX99 series, best suited for use in tasks requiring straight-forward computation and linear analysis.

Durability	10
Learning Rate	00
Fixed Skill Levels:	
Science	50
Navigation	150
Engineering	100
Communication	00
Medicine	20

Note: Because of the ancient enmity between the Elowan and the Thrynn, it is not advisable to include a member of each race on your crew. Although the individual members of these two races would undoubtedly deal with each other civilly on board your ship, you would be unable to communicate with either race in a space encounter. This is because the presence of a member of one race precludes any useful communication with the other race.

1.3 Skills Overview

Crew members (except for Androids, see Races, above) can be trained in five essential skills: **science, navigation, engineering, communications,** and **medicine**. All training is done in Personnel. A given crew member's learning rate depends on the learning rate of his or her race. All skills are important to the proper functioning of your vessel, with the most important being Communication, Science and Navigation. Following is a brief description of each skill and its relevance to your crew.

Science: Your ship's sensors are your primary means of gathering information, and it is the duty of the Science Officer to interpret that information. The more skilled a Science Officer the more complete and accurate will be the information from the sensor reading. This information can be of vital importance (e.g., an alien vessel's military capability; a planet's suitability as a potential colony world). At skill levels greater than 150, a Science Officer can detect aliens over long distances and can pinpoint their position.

Navigation: Navigation is of primary importance to space travel. Without an effective Navigator you face the danger of becoming lost in space. This may result in the loss of precious time and fuel and may even place you in hostile territory. In addition, a skilled navigator (with a skill level greater than 150) can determine the presence of continuum fluxes in space. These fluxes are paired and connected by extra-dimensional worm-holes, so that by entering one of a pair of fluxes, your vessel will be transported, almost instantaneously, to the other. Although continuum fluxes can be useful in navigation (since a highly-skilled navigator can take advantage of their ability to transport you instantaneously), they can also be very hazardous. A poorly trained Navigator will have difficulty spotting fluxes and may even cause your vessel to hit one accidentally. Navigators with skill levels of 150 or below will not be able to see them at all. In addition, after transportation through a flux, it takes the Navigator time to determine the ship's new position. The more skilled the Navigator, the less time it will take and the less risk your crew will face. It is the Navigator who fires the ship's missiles and lasers; the more skilled the

navigator, the greater the accuracy of the shot. Finally, if your Navigator's skill is less than 200, your terrain vehicle may become lost during storms on a planet's surface.

Engineering: It is your Engineer's responsibility to repair any damage your ship sustains. The speed and efficiency with which the repairs are executed depends on the Engineer's skill rating. In addition, key elements may be required for repairs, and the longer a repair takes, the higher the probability that one of these element will be required. Repairs must be suspended until the missing element is obtained. All the elements that may required for repairs can be obtained in the Trade Depot at Starport (see Part 2, below).

Communications: Alien races will be your primary source of information. The Communications Officer interprets all communications using an on-board translating device. The less skilled the Communications Officer, the more untranslated material you can expect to receive. It is also helpful if your Communications Officer (and to a lesser extent any of other crew member) is a member of the alien race with which you are communicating. Thus, if one of your crew is a member of the alien race, your Communications Officer's skill level will be effectively increased by 25 points during the encounter. And if the Communications Officer happens to be a member of the alien race, his skill level is effectively increased by 50 points.

Medicine: Your Doctor's skill level determines the speed and efficiency of his medical treatment. Even though your ship is equipped with the latest in Medi-Tech devices, it is the Doctor's skill level that determines the speed and efficiency of the treatment. The higher the skill level, the less time it will take to treat a wound. All injuries heal naturally over the course of time at a rate proportional to the Doctor's skill level. Planetside treatment can never equal shipboard treatment where the Doctor has access to Medi-Tech equipment.

The Captain: Although there is no single "command" skill, your Captain's combined skill levels in the above five areas contributes to your ship's apparent power. A highly skilled captain can effectively double your ship's perceived power. Also, if any of your crew should be killed, the next most capable crewmember will take over the dead crewmember's functions. Training your captain can therefore provide backup skills.

PART 2: Starport

2.1 Overview

The Starport is your stepping stone to the universe, the place where each new adventure begins and ends. At the Starport you can select your crew, outfit your ship, read your messages, make financial arrangements, and generally take care of all your affairs before launching into space. The Starport consists of six independent modules and a docking bay. Each module provides you with a number of options, each one corresponding to a particular operation or activity. To enter a module, maneuver your character to the module's entry field (the small area like a welcome mat in front of the door) and press a key. See the enclosed reference card for details. The modules are described in detail below. Refer to Figure 1, below.

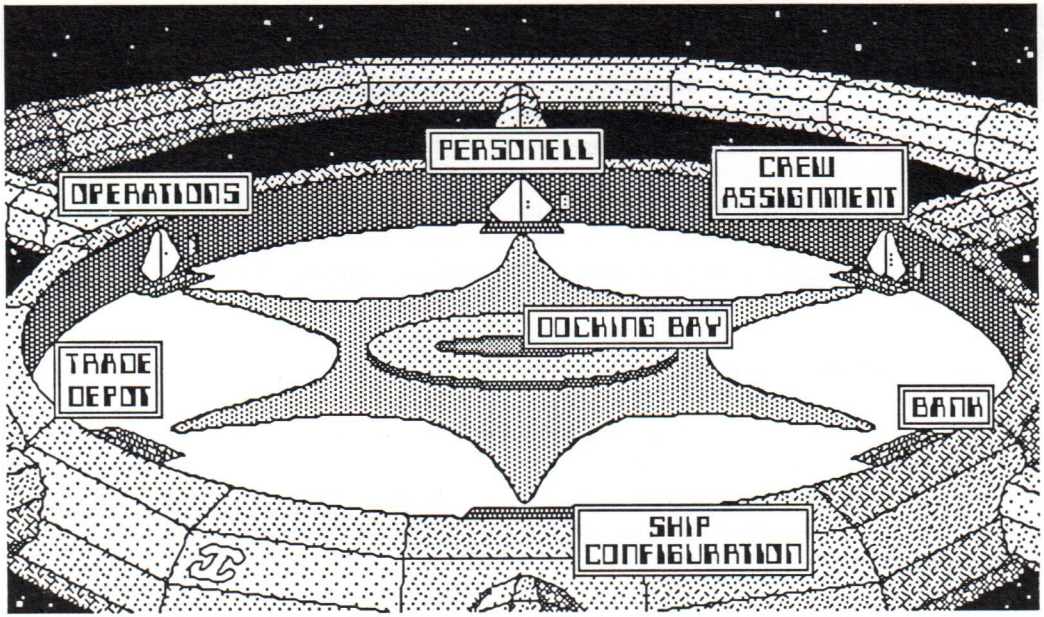

Figure 1: Starport

2.2 Starport Modules

2.2.1 Operations

In Operations you can receive messages from Interstel, and have your colony world recommendations evaluated. The following options are available:

Notices — This option lets you read the messages in your electronic mailbox. Messages can provide clues regarding alien encounters, possible colony world recommendations, locations of continuum fluxes, etc.

Evaluation — Use this option to evaluate your colony world recommendations, and to be informed of fines levied.

Exit — Returns you to the Starport amphitheater.

2.2.2 Trade Depot

At the Trade Depot you can buy or sell commodities or artifacts, and analyze any artifacts in inventory, whether yours or Starport's. The following options are available:

Buy — Shows items that are for sale, and their cost per cubic meter.

Sell — Shows all the salable items in your inventory *except* ship components.

Analyze — Describes all artifacts listed for sale. Will also describe, for a fee, any artifacts in the depot's inventory, and all those in your ship's hold.

Exit — Returns you to the Starport amphitheater.

2.2.3 Personnel

The Personnel module controls the selection and training of crewmembers, and the maintenance of all personnel files. The following options are available:

Create — Use this option to select the members of your crew. You can select crewmembers from any of the five races described above (see Section 1.2). Each crewmember has his or her own personnel file, containing statistics on race, skill levels, training and so on.

Train — Use this option to train your crewmembers in any of the five skill areas outlined above (see Section 1.3). Skill levels increase in accordance with the following formula: number of training sessions *times* learning rate. Note that training is expensive, and that initial capital provided by Interstel may not allow you to train all your crewmembers to the highest skill levels.

Delete — This option deletes all the data from the selected file. Note that any funds expended in training a deleted crewmember are not refunded upon deleting the file.

Exit — Returns you to the Starport amphitheater.

2.2.4 Crew Assignment

Any assignment or change in the duties of your crewmembers takes place in the Crew Assignment module. Here you can page through your personnel files and make or change any assignments. Each crewmember is summarized on the cover of his or her personnel file, which is displayed on the lower part of the screen. Duties and current assignments (if any) are displayed on the upper part of the screen. You can assign a crewmember to a particular duty when that crewmember's file is on the screen and when the required duty is highlighted on the upper part of the screen. Once you assign a crewmember, the "highlight bar" moves down to the next position. When all the duties have been assigned, the highlight bar disappears and you can return to the Starport amphitheater. See your reference card for details. If you want to change any assignments above the highlight bar, exit Crew Assignment and reenter.

2.2.5 Bank

Here you can examine your bank records, in the form of your 10 most recent financial transactions, showing dates, descriptions, amounts, and your ending balance. If your ending balance is negative, and you need to buy engines or Endurium, you will need to sell off inventory in order to leave the Starport. You may not buy anything on credit.

2.2.6 Ship Configuration

Here you can outfit your ship, repair damage, sell old equipment, and name (or rename) your ship. You can choose from the following options:

Buy — Use this option to outfit your ship with cargo pods, engines, shields, missiles and laser cannons. The following equipment is available for purchase (given sufficient funds):

Cargo Pods: Cargo pods can hold 50 cubic meters of cargo. Only one class of pod is available, at a cost of 500 mu. Tip: as soon as you can afford it, buy a pod, fill it with fuel and take it with you. It will extend your effective range.

Engines: you can choose from five classes of engines, ranging from Class 1 (1,000 mu) to Class 5 (100,000 mu). The higher the class, the better the fuel efficiency and the greater the ship's acceleration during encounters.

Shielding: Shields provide protection during combat, and range from Class 1 (4,000 mu) to Class 5 (125,000 mu). The higher the class, the more effective they are against enemy missiles and laser cannons. Shielding uses energy, and shields need to be raised or lowered (by the Navigator) as circumstances dictate. (A good Navigator should not be caught with his shields down, but neither should he keep them raised unnecessarily). In addition, shields are more expensive than armor (see below), and they do not function in nebulas. On the positive side, shields do not slow your ship down with a lot of weight (as does armor), they can be repaired if damaged, and they automatically recharge slowly during each encounter.

Armor: Armor provides alternative protection during combat. Unlike shields (see above), armor weighs a great deal and will slow your vessel down. In addition, armor cannot be repaired when damaged, and must be replaced. On the positive side, armor is cheaper than shielding (Class 1: 1,500 mu to Class 5: 25,000 mu), it is always in place, and continues to function in nebulas.

Missiles: Missiles cost more than lasers (see below), they can be dodged, and they use five times as much energy when fired. On the positive side, missiles inflict three times the damage of lasers, and they are effective at long range. Missile launchers cost more than laser cannons, ranging from 12,000 mu to 200,000 mu.

Lasers: Lasers are strictly short range weapons, and they inflict less damage than missiles. On the other hand, laser cannons are cheaper than missile launchers (ranging from 8,000 to 150,000 mu), and they cannot be dodged.

Sell — This option lets you sell the components of your ship, so you can buy a higher (or lower) class item. Note that depreciation begins the moment you buy an item, so that your selling price will always be lower than your purchase price (with the possible exception of cargo pods).

Repair — This option offers you quick dry-dock repairs. Be prepared for the high cost of this convenience.

Name — Use this option to name or rename your ship. Unchristened ships may not leave Starport.

Exit — Returns you to the Starport amphitheater.

2.2.7 Docking Bay

When you are ready to launch you ship into space, maneuver your character onto the docking bay in the center of the amphitheater (see Figure 1) and press a key. Starport will direct you from there. Remember to keep your Security Code Wheel handy as you leave Starport.

PART 3: Interstel Superphotonic Starship

3.1 Ship's Console

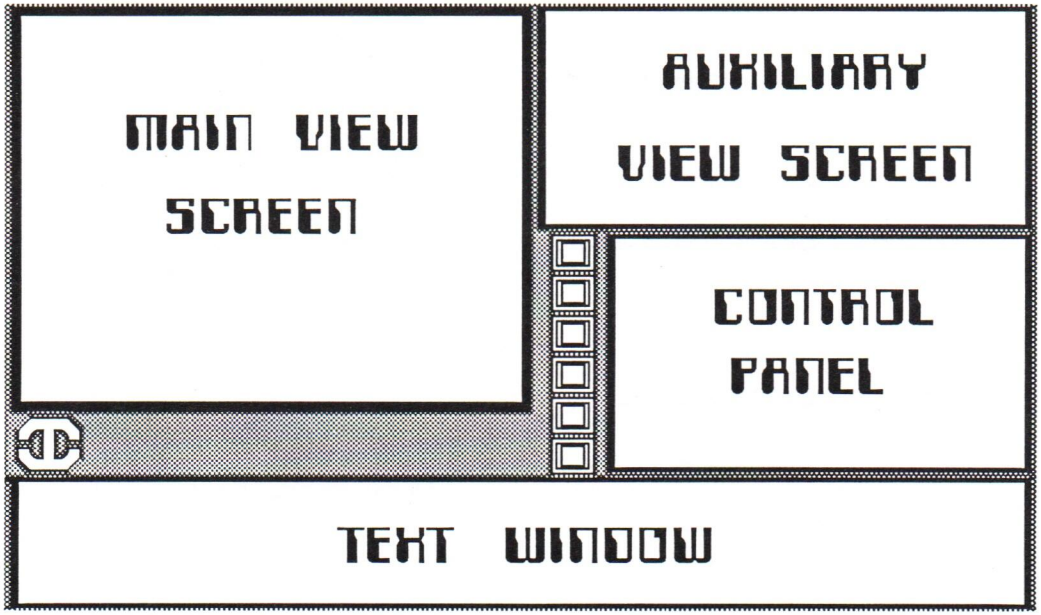

Figure 2: Ship's Console

The Ship's Console is divided into four main areas. The **Main View Screen**, the central viewing area for the main spatial displays and communications; the **Auxiliary View Screen**, for viewing ship status and sensor information; the **Control Panel** for executing commands through an array of buttons; and the **Text Window**, where all the text messages are displayed. These four areas are described in detail below. An additional area, above Main Screen, displays your coordinates in space. The first number displays your horizontal position, and the second your vertical position.

3.1.1 Main View Screen

This screen displays spatial and communications information. On it your computer will display tactical information during encounters, contour maps of planets from orbit, and planet and stars during system and hyperspace travel. Planet size as reflected on this screen is to scale.

3.1.2 Auxiliary View Screen

This screen displays Status and Sensor data from your Science Officer, and Damage and Repair information from your Engineer. You will also see system maps, Mercator projections and malfunction alerts displayed here.

3.1.3 Control Panel

The Control Panel can execute all the main ship commands through an array of buttons. Here you can select a crew member, and then select a function associated with that crew member.

3.1.4 Text Window

All text messages, both incoming and outgoing, are presented here. When you enter a System the Text Window displays the following information:

Spectral Class: see Spectral Chart.
Ecosphere: The band of acceptable radiation around a star, capable of sustaining lifebearing planets. Given in terms of orbital position. (e.g., Ecosphere, 2-4).

3.2 Flight Operations

Ship Functions are accessed via the Control Panel. Each crewmember controls a specific set of ship functions. To access a particular function, you first need to select the appropriate crewmember. Following is a brief description of all available functions classified by crewmember.

3.2.1 Captain

The Captain is the ultimate authority both in space and at Starport. The Captain decides when to launch or land the ship, which planets to recommend to Interstel, and when to disembark. When you select Captain from the Control Panel, you are provided with the following options:

Launch/Land — This option reads **Launch** until the ship has launched from Starport or a planet, after which it reads **Land**. The ship can only land from orbit. Choosing **Land** presents you with the following options:

Select Site: Allows you to select a promising landing site on the planet's surface. Move the cursor, using the arrow keys, over the target landing site. The planetary coordinates of the cursor's position will also be shown. You will be aided by a topographic map of the planet in the Auxiliary View Screen. To the right of this map is a topography key. The color of the top bar represents the highest altitude, the bottom color represents liquid terrain. While it is possible to land and travel in liquid terrain it is not recommended, since fuel efficiency is low and there are no minerals, lifeforms or ruins to be found.

Note: Generally, lifeforms tend to cluster in temperate climes at the lower altitudes, and minerals are found in much greater density at higher altitudes.

Descend: This option engages the autopilot. Descent to a planet's surface is automatic once the landing coordinates have been chosen in the **Select Site** option.

Abort: Returns you to Captain's option screen.

Disembark — This option allows the crew to leave the ship when it has landed on a planet or docked at Starport.

Cargo — This option allows the Captain to examine the current cargo list, jettison undesired items, and pick up debris from destroyed alien spaceships. Note that any item jettisoned is considered destroyed and cannot be recovered. Note also that messages obtained from ruins are considered cargo.

Log Planet — This option allows the Captain to recommend a planet to Arth for colonization via a superphotonic homing drone. Recommendations may be made either from orbit or from the planet's surface but can only be made once for any given planet.

Ship's Log — This option allows the Captain to read from and write to a personal ship's log. There is a limited amount of space in the log. To quit this option move to EXIT and press the Return key.

Bridge — This option is the same for all crew members, and restores you to the Control Panel so you can choose another function.

3.2.2 Science Officer

The Science Officer is responsible for gathering and analyzing all relevant information about the status and condition of the ship as well as its surroundings. When Science Officer is selected from the Control Panel, the following options become available:

Sensor — This option provides various items of information, depending on current status or location. The Sensor is one of the main sources of information about your ship, alien ships, and planets. The following information is available through the sensor, classified by location:

In Orbit:

Auxiliary View Screen:

Mass: Mass of planet (in tons).
Bio: Percentage of life density.
Min: Percentage of mineral density

Note: 100% life or mineral density would be the maximum possible under that planet's geologic and life sustaining conditions.

Text Window:

Atmosphere: Lists the main components of a planet's atmosphere, in decreasing order (i.e., first listed is the primary component, etc.).
Hydrosphere: Major components of a planet's liquid surface area.
Lithosphere: Major minerals to be found on a planet's land surface area.

During an Alien Encounter

Auxiliary View Screen:

Mass: Mass of alien ship (in tons).
Bio: Displays percentage of undamaged Lifeforms on board the alien vessel. If 50 per cent of the Lifeforms are dead, the display will read 50.
Energy: Undamaged percentage of alien ship.

Text Window:

Object Constituents: Displays the composition of the alien vessel.

Analysis — Use this option to have the Science Officer present his analysis of sensor data he has gathered. Note that the Science Officer needs to take the corresponding sensor reading before you can exercise this option. Analysis data is given below classified by location.

In Orbit

Text Window:

Orbit Number: Each star has eight possible orbit positions, ranging from Orbit Position # 1 (the closest to the star) to Orbit Position #8 (the furthest from the star. The Orbit Number refers to the orbit position (or slot) occupied by the planet you are orbiting. Not all positions are occupied, so it is possible that a planet may appear to be the third planet from the star, when in fact it is occupying Orbit Position # 5.
Predominant Surface: The planet's primary suface constituent.
Gravity: Shows the planet's gravitational force. A gravity of more than 8.0 *g*'s will crush your hull if you attempt to land on the planet.
Atmosphere: Shows the primary contituents of the planet's atmosphere.
Temperature: Shows the planet's possible temperatuere range.
Global Weather: Shows the predominant global weather conditions.

During an Alien Encounter

Text Window:

Object: States the general nature of the object. (e.g., SHIP)
Type: States the general type of object. (e.g., SCOUT)
Size: Gives the size of the object (in relation to the size of your ship).
Shields: Gives the alien vessel's shield status (e.g., Equivalent of Class 3, raised).
Weapons Status: Shows whether the alien vessel's weapons are armed.

Status — This option presents the ship's General Status on the Auxiliary View Screen. The following information is provided on the Auxiliary View Screen:

Date: Day.Hour-Month-Year.
Damage: Amount of damage sustained by your ship.
Cargo: Percentage of cargo hold full.
Energy: Displays amount of Endurium remaining, in cubic meters.
Shields: States whether shields are **up** or **down**.
Weapons: States whether weapons are **armed** or **unarmed**.

Bridge — Return to **Control Panel**.

3.2.3 Navigator

The Navigator is responsible for maneuvering the ship through space, for raising and lowering the ship's shields, and for arming or disarming the ship whenever necessary. In addition, the Navigator is responsible for firing your ship's weapons during combat. When you choose Navigator from the Control Panel, the following options become available:

Maneuver — This option engages the navigational controls. Once engaged, you can maneuver your ship by using the appropriate keys. See your Reference Card for details.

Raise Shield/Drop Shield — This option reads **Raise Shield** when the shields are down and **Drop Shield** when they are up. Shields use energy while they are up.

Arm/Disarm — This option reads **Arm** when weapons are disarmed and **Disarm** when they are armed. Weapons must be armed before firing.

Combat — This option allows the Navigator to fire the ship's weapons, once they have been armed (see above). Once **Combat** has been engaged, you can aim by swiveling the nose of the ship. Your ship also has a limited Maneuver capability while in the **Combat** option. Fire your weapons by pressing the space bar. If your ship has more than one kind of weapon, the on-board combat computer will fire the most appropriate one, depending on the range of the target. To exit the combat option, press the Return key.

Bridge — Return to Control Panel.

3.2.4 Engineer

The Engineer is responsible for surveying any damage to the ship and for repairing it. Highly skilled engineers are capable of repairing more than their lesser counterparts. When you select Engineer from the Control Panel, the following options become available:

Damage — This option displays the Engineer's damage report on the Auxiliary View Screen. Graphs indicate percent of damage for each section of the ship. Note that percent of damage is also equal to the percentage probability that the damaged section will fail altogether. Thus if a section of the ship has sustained 50 per cent damage, there is a 50 per cent probability of total malfunction of that section.

Repair — This option allows the Engineer to repair damaged sections.

Bridge — Return to Control Panel

3.2.5 Communications Officer

The Communications Officer is responsible for all communications with Interstel as well as with alien life forms encountered in space. The higher a Communications Officer's skill, the more efficient the communications. See Section 4.2 below for more information on alien space encounters. When you select Communications Officer, you are presented with the following options:

Hail/Respond — This reads **Hail** unless you have already been hailed by another vessel, in which case it would read **Respond.** All communications activity is carried out through this option. When you **Hail/Respond** you can adopt one of the following postures:

Friendly
Hostile
Obsequious

Your message will be transmitted in accordance with the chosen posture. Becoming friendly with aliens can give you access to new information. When you **Respond** (as appropriate), you can choose from:

Statement: If you wish to make a statement of some kind. Note that statements are more likely to affect the aliens' attitudes than are questions.

Question: If you wish to ask a question. You can choose from the following possible areas of inquiry:

Themselves
Other Races
Old Empire
Ancients
General Information.

Posture: To change your posture. You do not need to select this if you wish to maintain the same posture.

Terminate: To terminate communications.

Distress — Launches a superphotonic homing drone to Starport. This results in your ship and crew being put in stasis and towed home by another Starport vessel. There is a stiff fee for this service, which will vary depending on the distance you are towed.

Bridge — Return to Control Panel

3.2.6 Doctor

The ship's doctor is responsible for examining and treating injured crewmembers. The higher the doctor's skill level, the faster the cure. Selecting Doctor from the Control Panel provides you with the following options:

Examine — This option allows the Doctor to study a readout of the physical condition of any of the crewmembers.

Treat — This option allows the Doctor to treat injured crewmembers. Even though natural healing will occur on board ship, selecting Treat will speed up the process.

Bridge — Return to Control Panel

Part 4: Space

4.1 General Information

All navigation and maneuvering in space is effected with the help of the Main View Screen displays generated by the on-board computer. The computer provides spatial information at four different levels, as follows:

4.1.1 Hyperspace: This is where interstellar travel occurs. When you are in Hyperspace you can see stars (see Starmap), continuum fluxes, and nebulae. Note that the size of a star in hyperspace varies with its spectral class (see Appendix A below).

4.1.2 Star Approach: Approaching a star lets you enter its solar system. To return to Hyperspace, simply maneuver past the edge of a system. A planet's color or pattern indicates its primary surface type. (See Appendix A below).

4.1.3 Planet Approach: Approaching a planet lets you establish an orbit around it. To enter into orbit around a planet, press any key when you are over the planet's center. To leave a planet's orbit, use the Navigator's Maneuver option. (The same applies to exit Starport).

4.1.4 Tactical Level: The Tactical level is automatically obtained whenever an encounter occurs with an alien vessel. You can enter the Tactical level from Hyperspace, from the solar system, or from orbit. To leave an encounter you must continue traveling until the alien craft is no longer visible on the screen.

4.2 Alien Encounters

You can encounter alien vessels at any time, even when you are in Hyperspace. When that happens, you automatically drop from Hyperspace. If you need to quit an encounter, enter your Navigator's Maneuver mode and move away from the alien ship until it is no longer visible on your view screen. Note that during an encounter, the alien ship can scan your ship and analyze your strengths and weaknesses, just as you can theirs. In particular, they can detect if your shields are up and whether or not your weapons are armed. These may be interpreted as hostile gestures.

4.2.1 Communications

Communicating with aliens can be an enlightening experience, to say the least. The main points on alien communication have already been covered in Section 3.2.3 above. Here are some additional hints to make your communications more effective. First, you can pause communications for up to two minutes by pressing the + key. This will give you a little time to gather your thoughts without the realtime clock ticking. Second, not all races respond optimally to the **Friendly** posture. Experiment with different postures until you discover the most effective approach for each race. Make notes of any information you receive during each encounter, including information on the success or failure of a particular posture, as well as general information that can help you complete your mission. Once you develop friendly relations with a race, they will be willing to give you more information.

Finally, note that not every member of a given race will have the same knowledge and information as any other member of that race. Feel free to ask others the same question.

4.2.2 Combat

The greater the number of combat incidences with any race, the less likely it is that you will ever be able to establish friendly communications with that race. It sometimes pays to be friendly, or even obsequious, if that doesn't offend your sense of dignity. Note that some alien vessels are impervious to certain kinds of weapons, so even a direct hit may amount to nothing against a vessel immune to that kind of weapon. Experience will guide you on the correct choice of weapon under the circumstances. And while you may be able to evade missile attacks, you cannot evade laser fire. Note that it is not always desirable to completely destroy alien vessels during combat. If you cease combat and enter communications, the aliens may surrender and tell you anything you want to know.

When the smoke settles from a hostile encounter (and if you emerge victorious) you can pick up any item of debris from the destroyed alien spacecraft. Have your Navigator Maneuver over to the craft, and then exit Maneuver. Enter the Captain mode, and select the Cargo option. Pick up any valuable debris.

For more detailed information, refer to the Combat option of the Navigator mode (Section 3.2.3, above).

Part 5: Planetside

5.1 Planetfall

As Captain, you can give orders to make planetfall via the **Land** Option. When you select **Land**, you are presented with the options **Site Select** and **Descend**, as well as a Mercator Projection of the surface of the planet. **Site Select** allows you to choose your landing site, while **Descend** engages the auto-approach sequence. See the Spectral and Planet Surface Charts in Appendix A for selecting favorable planets and suitable landing sites.

5.2 Planetside

Once on the surface of the planet you have a number of options available. These are listed at the bottom of the screen: **Maps, Move, Cargo, Look, Scan, Weapons,** and **Icons.**

5.2.1 Maps: Your Terrain Vehicle is equipped with numerous sensors as well as an on-board computer. This computer is capable of generating contour maps of the terrain at three levels of magnification. You can toggle between these three levels by pressing any key. The colors (or patterns) on these maps represent different altitudes and surface types. The key for these can be seen whenever the contour map is up. It is a good idea to check Maps after the message Scanning New Terrain appears on the screen. Use right arrow key to leave this option.

5.2.2 Move This option returns control of the Terrain Vehicle's movement. Move your terrain vehicle by using the arrow keys. Because of continual need for life support and the limited capacity of your environment suits, extended travel on foot is not possible. Your terrain vehicle has a small reserve fuel supply sufficient to take you from 5 to 25 "steps" depending on terrain. Fuel efficiency is a function of altitude — the higher the altitude, less the efficiency. To re-enter the ship move the terrain vehicle over it and press any non-arrow key.

5.2.3 Cargo This presents you with a list of all the cargo you are carrying and gives you the option of dropping anything. When an object is dropped on a planet's surface it can be picked up again. Cargo also allows you to pick up any item (including Lifeforms) next to your terrain vehicle, record messages found in Ruins, and make holographic recordings of Lifeforms. You must be directly beside an object to put it into **Cargo**. Note that any messages you find are identified by the date found. The cargo hold has a capacity of 50 cubic meters.

5.2.4 Look This option places a moveable cursor on the tactical map, allowing you to examine any part of the terrain. Move the cursor with the arrow keys and press a key.

5.2.5 Scan This option places a moveable cursor on the tactical map, allowing you to scan the terrain using your sensors. The results of your scanning are made available in a readout. Only lifeforms can be scanned. Note that lifeforms are not distributed evenly over the planet's surface, but tend to clump in the lower elevations near the equator or other temperate areas. The configuration of lifeforms on a planet is consistent with that planet's gravity.

5.2.6 Weapons Your Terrain Vehicle is equipped with a laser and a stunner. You can choose which one to fire through the Weapons option. Bracket the target by using the arrow keys, and fire by pressing any other key.

5.2.7 Icons This option presents a key of all the icons used by the Terrain Vehicle computer in the Tactical display, and a topographical key for the planet. It also lists the mineral, and the ancient and recent ruins icons.

5.3 Planetary Conditions

Recommending a planet for colonization requires assessment of a number of variables. Remember that if you recommend a planet as habitable and it turns out to be otherwise, you can incur heavy penalties. The following is a set of guidelines to help you make the right recommendations.

5.3.1 Temperature Some portion of the planet must fall within an acceptable temperature range. The following table shows the range of temperatures:

SUB- ARCTIC
ARCTIC
TEMPERATE
TROPICAL
SEARING
INFERNO

Parts of a planet must fall within the highlighted range to be suitable for colonization.

5.3.2 Gravity The gravity of a planet must not be "crushing," and it is preferable if it is lighter than "very heavy." Gravity must be below 2.0 *g*'s for a planet to be suitable for colonization ---.7 to 1.3 is optimal.

5.3.3 Atmosphere The planet must have an atmosphere and the atmosphere must contain Oxygen.

5.3.4 Water There must be at least a minimal amount of free water.

5.3.5 Atmospheric Activity Planets with violent or very violent atmospheric activity are unacceptable. The following chart can serve as a guide

NONE
CALM
MODERATE
VIOLENT
VERY VIOLENT

Weather conditions must be within the highlighted area to make a planet suitable for colonization.

5.3.6 Bio-density Planets with a higher bio-density are more preferable but this is not a necessity.

5.3.7 Minerals Planets with abundant mineral deposits are also preferable, although this, too, is not a necessity.

*Note that a planet may be suitable in a number of ways but have just one feature that makes it untenable as a colony world.

Appendix A: Planetary Charts

1. SPECTRAL CHART

COLOR	CLASS
Red	M (coolest)
Orange	K
Yellow	G
White	F
Green	A
Light blue	B
Dark Blue	O (hottest)

2. PLANET SURFACE CHART

COLOR	TYPE
Red	Molten
Brown	Rock
Blue	Ocean
White	Frozen
Violet	Gas Giant

3. MINERAL VALUE CHART

Lead	40
Iron	60
Cobalt*	80
Nickel	100
Copper	120
Zinc	140
Molybdenum*	160
Tin	180
Magnesium	200
Aluminum*	220

Titanium*	240
Chromium	260
Antimony	280
Promethium*	300
Mercury	320
Tungsten	340
Silver	360
Gold	380
Platinum	400
Plutonium	420
Rodnium	440
Endurium	1000

* Repair Minerals

4. LIFEFORM VALUE CRITERIA CHART

Use the following five criteria for judging the value of a lifeform:

New Species: It must be a species not previously captured or recorded.
Intelligence: The more intelligent it is, the more valuable.
Niche: The higher its position on the food chain, the more valuable it is.
Size: The bigger it is, the more valuable.
Distance: The farther away from Arth, the greater the lifeform's value.

Note that you cannot capture flying or floating lifeforms.

Appendix B: Energy Usage Chart

Hyperspace travel	.48 to .16 cubic meters / coordinate travelled (based on engine class) .
Firing laser	.01 cubic meters
Firing missile	.05 cubic meters
Shields raised	.1 cubic meter / star hour
Launching or landing	.25 / cubic meter per G of the planet

Appendix C: Excerpt from the Religious Writings of Arth

The Book of Endurium

Chapter One: The Years of Darkness (and Chaos). Verses 1-6.

1. In the beginning there was darkness... or was there light... no, there was darkness. Anyway, then Man came on the scene and verily did he create a great spacefaring empire and unto him... you know I'm almost positive there was darkness in the beginning.

2. Well, so anyhow, man spreadeth wide and extended himself amongst the heavenly bodies of the universe, and it was good (really, in fact, it was great!). And thereby and thusly did he findeth the other races. And unto his Empire did he take them, and yea did he accepteth them almost as equals.

3. And for a time there was rejoicing and forsooth all was hunky dorey. Then, upon Mankind was there laid the greatest of catastrophes and he was bummed. The lands trembled and the skies burned and Yea destruction was brought down upon the Empire of Man.

4. And in the fall of this righteous and glorious empire did the other races seize upon the opportunity to express their disapproval of mankind's ways and verily did they slaughter billions of his number. And following this were the Dark Years of Chaos.

5. Woe and Yea and Woe were these years not dark, and were they not also chaotic? Verily were they chaotic and dark. In these years was there the darkness of chaos and the chaos of darkness. Both the darkness and the chaos were like unto no darkness or chaos as had been seen before.

6. And from this dark chaos, which was both chaotic and dark, were born the colonial worlds of Noah, which were like unto children of the empire. And among these worlds, which were like unto siblings, was Arth, and it's moons were like unto children of Arth, which were like unto grandchildren of the Empire, and first cousins of the other colonial worlds.

Chapter Two: The Prophecy. Verses 1-4.

1. And Yea shall Arth be plunged into dark years of chaos. I say unto thee Yea. Yea! Shall these years be dark and chaotic like unto the other dark years of chaos. Woe, shall they be even more dark and more chaotic. Verily shall they be so dark and so chaotic it can not even be imagined how dark and chaotic they shall be.

2. Long and long shall these years of darkness and chaos be. And then from these dark years shall there arise a new Arth and a New Council and lo, they shall be new. And then, within the bowels of Arth shall there once again be movement. Yea, and proudly shall man once again walk the corridors of the children of Noah.

3. And within these corridoors shall he once again findeth the Rock of the Ancients, which was first found by Man within the ruins of the Ancients wherein they did dwell and live and generally hang out, long and long ago. Praise be to the Ancients who were like unto... well, who were like unto nothing in particular, and who did walketh amongst the stars before even mankind was a twinkle in the cosmic eye of reality.

4. Hail Endurium, oh holiest of rock-like, high-yield energy materials! Oh beauteous shining Rock of Truth! Praise be to that holy legacy of the Ancients for in it shall mankind once again findeth his destiny amongst the stars!

So it is written.

Appendix D: Excerpts from Captain's Log: Noah 2 Expedition

1100 hrs. 3-22-3454

We are exactly 9 hours away from Earth and the crew is completely exhausted. It is has been four hours since we were attacked by the Gazurtoid ships and I am going to Yellow Alert so that some of the crew can get some rest. While the ship has sustained major damage, all systems are operational and there are, miraculously, no casualties.

I am afraid that in my optimism I have made a grave error in judgement and endangered the lives of all aboard. In selecting our course I was fully aware of the fact that the primary jump link would leave us just outward of the Staff Constellation; lately there has been a good deal of Gazurtoid activity in that area. Since the link was only about 8 sectors from the Sol System, however, and since there existed a secondary link which would deposit us in the immediate vicinity of Arth in a matter of hours, I foolishly decided to risk an encounter rather than spend weeks in hyperspace.

The moment we dropped out of the Flux we were under attack. Our missiles had little or no effect on the Gazurtoid ships. Apparently they have devised some new form of shield against missile attacks. Fortunately, we accidently hit another Flux just upspin and core-ward of the first one. Our Navigator has just located our position and we are at 189, 190. This puts us quite a long way from our destination, but we are alive. With luck and no more surprises we should reach Arth in approximately two days.

Captain out.

Appendix E: Timeline

With the information we've discovered in the underground colony ruins our researchers have been able to piece together a timeline which we feel is fairly accurate. We are still not sure about a lot of the details, and many of the references are obscure. We are hoping that from your explorations you may be able to provide us with enough data to fill in all the remaining gaps.

2100 - Man discovers Endurium.

2150 - Man discovers Endurium's appliction to superphotonic technology and begins exploring. Colonization begins. Start of Empire.

2300 - Man meet Velox.

2650 - Major Endurium finds usher in Empire's Golden era.

2675 - Empire discovers Spemin.

2770 - Empire discovers Thyrnn and Elowan.

3000 - Start of first wave (?).

3120 - Velox pact of 3120.

3260 - First wave (?) ends.

3400 - Start of second wave (?).

3450 - Project Noah is initiated.

3454 - Launch of Noah 2 expedition.

3480 - Fall of Earth.

3505 - Bomb hit Arth, creates Southern Hot Zone and forces underground colonists above ground.

3520 - Arth society collapses and the Dark Years begin.

4400 - Arth's new era begins with the new council and the industrial revolution.

4500 - Rediscovery of space flight (sublight).

4594 - Discovery of Noah 2 colony and Endurium.

4615 - First group sent out in superphotonic ships.

4620 - Present day.

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